

PC-0041CIP

What is claimed is:

1. An isolated cDNA comprising a nucleic acid sequence encoding a protein having the amino acid sequence of SEQ ID NO:1, or a complement of the nucleic acid sequence.
2. An isolated cDNA comprising a nucleic acid sequence selected from:
 - a) SEQ ID NO:2 and the complement thereof;
 - b) a fragment of SEQ ID NO:2 selected from SEQ ID NOs:3-6 and complements thereof; and
 - c) a variant of SEQ ID NOs:2 selected from SEQ ID NO:7, SEQ ID NO:8, and their complements.
3. A composition comprising the cDNA of claim 1 and a labeling moiety.
4. A vector comprising the cDNA of claim 1.
5. A host cell comprising the vector of claim 4.
6. A method for using a cDNA to produce a protein, the method comprising:
 - a) culturing the host cell of claim 5 under conditions for protein expression; and
 - b) recovering the protein from the host cell culture.
7. A method for using a cDNA to detect expression of a nucleic acid in a sample comprising:
 - a) hybridizing the cDNA of claim 1 to the nucleic acids of the sample thereby forming at least one hybridization complex; and
 - b) detecting complex formation, wherein complex formation indicates expression in the sample.
8. The method of claim 7 further comprising amplifying the nucleic acids of the sample prior to hybridization.
9. The method of claim 7 wherein the cDNA is attached to a substrate.
10. The method of claim 7 wherein hybridization complex formation is compared to at least one standard and is diagnostic of a squamous cell carcinoma.
11. A method of using a cDNA to screen a plurality of molecules or compounds, the method comprising:
 - a) combining the cDNA of claim 1 with a plurality of molecules or compounds under conditions to allow specific binding; and
 - b) detecting specific binding, thereby identifying a molecule or compound which specifically binds the cDNA.
12. The method of claim 11 wherein the molecules or compounds are selected from DNA molecules, RNA molecules, peptide nucleic acids, artificial chromosome constructions, peptides, transcription factors, repressors, and regulatory molecules.
13. A purified protein or a portion thereof produced by the method of claim 6 and selected from:

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- a) an amino acid sequence of SEQ ID NO:1;
- b) an antigenic epitope of SEQ ID NO:1; and
- c) a biologically active portion of SEQ ID NO:1.

14. A composition comprising the protein of claim 13 and a labeling moiety or a pharmaceutical carrier.

5 15. A method for using a protein to screen a plurality of molecules or compounds to identify at least one ligand, the method comprising:

- a) combining the protein of claim 13 with the molecules or compounds under conditions to allow specific binding; and
- b) detecting specific binding, thereby identifying a ligand which specifically binds the protein.

10 16. The method of claim 15 wherein the molecules or compounds are selected from DNA molecules, RNA molecules, peptide nucleic acids, peptides, proteins, mimetics, agonists, antagonists, antibodies, immunoglobulins, inhibitors, and drugs.

17. A method of using a protein to prepare and purify antibodies comprising:

- a) immunizing a animal with the protein of claim 13 under conditions to elicit an antibody response;
- b) isolating animal antibodies;
- c) attaching the protein to a substrate;
- d) contacting the substrate with isolated antibodies under conditions to allow specific binding to the protein;
- e) dissociating the antibodies from the protein, thereby obtaining purified antibodies.

18. An antibody produced by the method of claim 17.

19. A method for using an antibody to detect expression of a protein in a sample, the method comprising:

- a) combining the antibody of claim 18 with a sample under conditions which allow the formation of antibody:protein complexes; and
- b) detecting complex formation, wherein complex formation indicates expression of the protein in the sample.

20. The method of claim 19 wherein expression is compared with at least one standard and is diagnostic of squamous cell carcinoma.